

Mr. Page
Classroom: 202H
School Number: 356-2050

GEOMETRY
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CLASSROOM INFORMATION

Needed for Textbook, folder, iPad, iPad pen, pencils, at least 2 different colored highlighters, and scientific calculator (with sin, cos, tan). You will be assigned a textbook by number. You are responsible for returning this book in a similar condition at the end of the year. It is strongly recommended that you not lend your textbook to others. **DO NOT WRITE IN YOUR BOOK, except to write your name inside the front cover!**

DO NOT DO HOMEWORK ASSIGNMENTS, QUIZZES OR TESTS IN PEN!

Homework: Each day you will be given an assignment to be completed for the next class period. In most cases if the assignment is not being collected, answers will be given the next day or on Schoology/OneNote, so you can check your work. If you had some trouble, this is the time to **ask questions**. Remember all assignments are to be done in OneNote unless a hard copy has been handed out. Assignments are to be submitted to Schoology to the proper assignment or shown to Mr. Page during homework time. Some worksheet assignments will also be turned in and graded. Late work will be graded at 50% one day after the assignment is due, and any work collected after one day is worth 0%.

Unannounced quizzes will also be given. All work must be shown for problems to receive full credit on either homework, quizzes, or tests.

ALWAYS BE PREPARED FOR CLASS!

Daily work: Worksheets and book assignments will also be collected and graded periodically without being announced prior to when they are collected.

Quizzes: Quizzes will be given approximately once or twice a week. Any missing quizzes will be put in the gradebook as 0's until they are made up. They must be made up prior to the chapter test or they will remain as 0's

Tests: A test will be given after each chapter/unit and occasionally a unit may be split and tested halfway through the unit. Each test will be worth 100 percent and will contain questions of varying point values. Therefore, it is important to show all work. Partial credit may be given.

Grade:

Grading Scale:

Grading Weight:

A = 90 – 100%

65% Tests

B = 80 – 89%

20% Quarter Cumulative Tests

C = 70 – 79%

10% Quizzes

D = 60 – 69%

5% Homework

F = Below 60%

I DO NOT OFFER INDIVIDUAL EXTRA CREDIT.

Cell Phone, ear buds etc.

Cell phones and smart watches are not allowed in class. These items must be stored away in a backpack or another area that is not on your person. The consequences of breaking this rule will follow school policies and procedures. **Ear buds** will be allowed during work time, your school issued iPad must be used to play any music during this time. If you are using them for any other purposes they will be taken and follow the cell phone consequences.

For Questions and Help on Homework

I will be available during first period on days we don't collaborate, and during my 6th hour prep. If you are having difficulty and cannot find a time to get help, please talk to me so we can schedule some help time that works for you.

Geometry Objectives:

Upon completion of Geometry, students will be able to ...

- Identify the undefined notions used in geometry (point, line, plane, distance) and describe their characteristics.
- Identify angles, circles, perpendicular lines, parallel lines, rays, and line segments
- Define angles, circles, perpendicular lines, parallel lines, rays, and line segments precisely using the undefined terms.
- Draw transformation of reflections, rotations, translations, and combinations of these using graph paper, transparencies, and/or geometry software.
- Determine the coordinates for the image (output) of a figure when a transformation rule is applied to the pre-image (input).
- Distinguish between transformations that are rigid (preserve distance and angle measure- reflections, rotations, translations, or combinations of these) and those that are not (dilations or rigid motion followed by dilations).
- Calculate the number of lines of reflection symmetry and the degree of rotational symmetry of any regular polygon.
- Draw a specific transformation when given a geometric figure and a rotation, reflection, or translation.
- Predict and verify the sequence of transformations (a composition) that will map a figure onto another.
- Define rigid motions as reflections, rotations, translations, and combinations of these, all of which preserve distance and angle measure.
- Define congruent figures as figures that have the same shape and size.
- Identify corresponding sides and corresponding angles of congruent triangles.
- List the sufficient conditions to prove triangles are congruent.
- Identify and use the properties of congruence, reflexive, transitive and symmetric in proofs.
- Correctly interpret geometric diagrams by identifying what can and cannot be assumed.
- Use theorems, definitions and postulates in proofs about lines and angles including:
 - a. Vertical Angles are congruent.
 - b. When a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent, and same-side interior angles are supplementary;
 - c. Points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
- Use theorems, postulates, or definitions to prove theorems about triangles, including:
 - a. Measures of interior angles of a triangle sum to 180° ;
 - b. Base angles of isosceles triangles are congruent;
 - c. The segment joining midpoints of two sides of a triangle is parallel to the third side and half the length;
 - d. The medians of a triangle meet at a point.
- Use theorems, postulates, or definitions to prove theorems about parallelograms, including:
 - a. Prove opposite sides of a parallelogram are congruent;
 - b. Prove opposite angles of a parallelogram are congruent;
 - c. Prove the diagonals of a parallelogram bisect each other;
 - d. Prove that rectangles are parallelograms with congruent diagonals.

- Define inscribed polygons (the vertices of the figure must be point on the circle).
- Determine that two figures are similar by verifying that angle measure is preserved and corresponding sides are proportional.
- Use theorems, postulates, or definitions to prove theorems about triangles, including:
 - a. A line parallel to one side of a triangle divides the other two proportionally;
 - b. If a line divides two sides of a triangle proportionally, then it is parallel to the third side;
 - c. The Pythagorean Theorem proved using triangle similarity.
- Use triangle congruence and triangle similarity to solve problems
- Calculate sine, cosine and tangent ratios for acute angles in a right triangle when given two side lengths.
- Solve right triangles by finding the measures of all sides and angles in the triangles.
- Use the Pythagorean Theorem to solve for an unknown side length of a right triangle.
- Solve application problems involving right triangles, including angle of elevation and depression, navigation, and surveying.
- Identify central angles, inscribed angles, circumscribed angles, diameters, radii, chords, and tangents.
- Describe the relationship between a central angle, inscribed angle and circumscribed angle and the arc it intercepts.
- Recognize that the radius of a circle is perpendicular to the tangent where the radius intersects the circle.
- Calculate the area of a sector using the ratio of the intercepted arc measure and 360° multiplied by the area of the circle.

Prior to Geometry, students should already be able to ...

- d. Graph linear and quadratic equations
- e. Solve linear and quadratic equations
- f. Factor quadratic expressions
- g. Simplify radicals
- h. Simplify polynomials

Daily performance can be affected by:

1. Attendance. Tardies and bathroom trips reflect your willingness to stay in the classroom and work.
2. Work performance DURING class. (Stay on task.)
3. Accurate completion of homework.
4. Willingness to ask questions.
5. Participation in class discussions, group work, and enrichment activities.
6. Cooperation with teachers and classmates.

If you know you are going to miss class (meetings, sports, music, etc.), it is **your responsibility to get your assignments ahead of time** so that you don't fall behind. If you are sick, you will be given one more day than the number of days you missed to complete any makeup work or tests. An exception to this is if you are absent for only part of the day. You are then expected to get the assignments for the classes you missed or will miss. (See your Packer Planner for school rules regarding absences.) It is preferred that tests be made up before or after school or during your free period.

REMEMBER: Homework is important and greatly enhances learning. Do not get behind. Each new lesson is built on the lesson before it. **Ask questions.** If there is not enough time to answer all of your questions in class, get help outside of class. It is **your** responsibility to get help before or after school or during your free period.

Math Help

The following online sites may be of assistance.

- i. tutornd.com (This site is recommended by administration because there are live tutors available Sunday-Thursday from 6PM-10PM. You MUST first log in at the high school to create a username and password before you can access from home.)
- j. brightstorm.com
- k. www.khanacademy.org

CLASSROOM RULES

1. Come to class on time and prepared. Always bring your homework, notebook, book, calculator, iPad, and pencils
2. Remain on task throughout the class period.
3. When I am talking, you are not. When you are talking, the rest of us are not. Respectful listening will be practiced in this classroom.
4. Raise your hand before asking/answering a question. Do not blurt!
5. Obey all school rules. This includes cell phone, smart watches, food, and beverage policies.
6. Show respect to others' rights, feelings, and property.
7. Do not use putdowns or profanity.

GROUP WORK

Occasionally, work will be completed in a group setting. This work is just as important as daily homework. Group expectations are:

1. Stay with assigned group.
2. Listen to and interact with other group members.
3. Talk in quiet voices.
4. Treat each other with respect.